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**THE EFFECTS OF RESIDENCE LOCATION
ON PARENTAL INVOLVEMENT WITH THE
SCHOOL: A CONTRAST BETWEEN
NONMETROPOLITAN RURAL
AND OTHER COMMUNITIES¹**

**By Yongmin Sun, Daryl Hobbs, William Elder
and Dongchu Sun²**

ABSTRACT

Educational research has long noted the impact of parental involvement with the school on a student's educational success. Despite decades of research, only a few studies have attempted to identify factors that account for variations in parental involvement. In this study, we have employed Coleman's notion of social capital to study the effects of family structure and residence location on parental participation in school related activities. Based on a large stratified sample of Missouri parents, our analyses have demonstrated that parents from dual-parent families and parents who have lived in a school district for a long period of time tend to participate more than their respective counterparts. Further, parents living in nonmetropolitan-rural areas participate in school activities more than those who live in other communities, net of effects of parents' social and demographic characteristics. Also, parents' socioeconomic status (SES) exerts a greater impact on involvement in nonmetropolitan-rural than in other types of communities. Our analysis has concluded that favorable family structures and rural residence location facilitate parental involvement with the school.

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INTRODUCTION

For the past two decades, educators, policy makers and the American public have become increasingly concerned with the unsatisfactory academic performance of public school students. This concern has stimulated a broad range of school reforms designed to promote academic success. The southern United States has been an especially active region in school reform, as chronicled by Vold and DeVitis (1991). Most of these reforms have sought to produce reorganization within schools, such as changes in curriculum, teaching methods and standards for teachers. However, Vold and DeVitis (1991) have concluded from their analyses that most of these changes have been relatively ineffective, because they tend to over-emphasize centralized bureaucratic control and neglect the importance of involvement of families and communities in students' education.

While reforms have been largely targeted toward changes within schools, a growing body of research has examined factors other than school resources and organization in order to find explanations for unsatisfactory student performance. Among various potential factors that affect student performance, many researchers have particularly underscored the importance of parental involvement in children's education. A greater extent of parental involvement has been found to enhance students' positive attitudes toward learning, improve study efficiency and foster academic success (Astone & McLanahan, 1991; Clark, 1983; Coleman, 1988; Ho & Willms, 1996; Stevenson & Baker, 1987). Although many studies have demonstrated that parental involvement enhances student performance, only a few have attempted to identify factors that affect parental involvement. Among those that have, most have focused on parental characteristics such as race (e.g. Kerbow & Bernhardt, 1994) and socioeconomic status (SES) (e.g. Ho & Willms, 1996; Lareau, 1987, 1989). In particular, few studies have taken an environmental or contextual perspective and investigated differences in parental involvement with schools in different types of localities. This lack of investigation from an environmental perspective is partly due to the lack of a conceptual model that can bridge residence location and parental involvement. It is also related in part to the fact that until recently, large scale parent survey data across a broad range of communities were unavailable.

In this study, we attempt to study parental involvement in school related activities from both individual and environmental perspectives. We

incorporate the concept of social capital (Coleman, 1988) into a model to examine (1) whether differences in family structure are associated with variations in parental involvement with the school, and (2) whether the extent of parental involvement in nonmetropolitan-rural areas differs from that in other types of communities. We also test whether this modified model fits parent survey data obtained from 296 schools in Missouri.

BACKGROUND

Previous Conceptual Models of Parent Involvement with the School

Previous investigators of parental involvement with the school **have established at least two conceptual models.** The traditional functionalist approach regards parent-school contacts as interactions between two basic social institutions of American society--family and school. In her recent review, Epstein (1992) has further classified this theoretical tradition into two models. The "stage" model stresses the crucial functions performed respectively by families and schools at different stages of the child development cycle (Freud, 1937; Piaget & Inhelder, 1969). Central to this model is an emphasis on the relationship between early cognitive training and later intellectual development. Because children are most likely to interact with their parents intensively in early childhood, parents play a critical role in their children's education before children go to school. As children mature, parents "hand over" some of their educational responsibilities to specialized educational professionals, resulting in a linear decrease of parental involvement as children progress through their developmental stages (Epstein, 1992).

Compared with the "stage" model, Epstein's model of "overlapping spheres of influence" places an emphasis on institutional connection rather than on institutional separation (Epstein, 1987). According to Epstein (1992), families and schools have overlapping responsibilities and are functionally interdependent. The coherence of such inter-institutional connections affects social equilibrium, with the specialized functions of each institution being coordinated by the societal system (Davis & Moore, 1966; Parsons, 1961). In Epstein's model, the extent of parental involvement with schools is conceptualized as an indicator of the strength of the functional linkage between families and

schools. Because this linkage involves agents from two institutions, its strength depends on the willingness and functional needs of both parents and school staff. Specifically, the level of parent-school contacts largely depends on children's ages and attitudes/practices of school staff (Epstein, 1987).

Alternatively, Coleman's notion of social capital provides another conceptual framework to study parental involvement. According to Coleman (1988), parental involvement can be regarded as an intentional investment of parents in their social ties within and outside family in order to promote their children's educational success. Within the family, social capital is embedded in the interpersonal relations among family members. It refers to the necessary social mechanisms (e.g., the presence of parents and an intimate parent-child relationship) that facilitate the activation of other forms of family-based capital (e.g., material and human) to serve educational purposes. Outside the family, social capital refers to a family's social network in the community, its relationships with other community members and school staff. From the perspective of the social capital model, active participation in school related activities is a deliberate attempt of parents to establish a social relationship with school staff and other parents. When activated, this social tie between a family and school staff/other parents can help the family utilize external resources to benefit children's education.

Since Coleman's original work, other researchers have attempted to strengthen the concept of social capital by pointing out its multiple dimensions. Stanton-Salazar and Dornbusch (1995) and Stanton-Salazar (1997), for instance, have particularly emphasized the network dimension of social capital. They argue that social capital represents a family's social network with "institutional agents" (e.g., teachers, counselors, principals, other parents in the communities) that possess valuable educational information, knowledge and expertise. These institutional resources take the form of academic help/monitoring, appropriate guidance for school programs and information about college admission or job advancement (Stanton-Salazar & Dornbusch, 1995). Given that these resources are finite within each school and institutional agents can give or withhold these resources (Sennett & Cobb, 1972), a good parent-school relationship becomes an extremely precious asset. Parents with this asset can easily access the limited resources through their established social ties with institutional agents. Following this argument, active involvement with the school is a wise social investment for parents. A large stock of such social

capital helps a family activate and transform such knowledge- and information-based institutional resources from institutional agents to serve students' educational needs.

Smith, Beaulieu and Seraphine (1995) have approached the multi-dimensional nature of social capital from a different angle. They argue that social capital consists of two major components: structure and process. The structural component provides necessary social actors, who can interact with one another. The structure also includes necessary social settings, within which social encounters occur. Within the family, the structural component can include factors such as the presence of both parents and the number of siblings (Smith et al., 1995). Given that parental resources are finite, a family of five children headed by a single parent is likely to have more structural barriers to developing social capital within family and with school staff than a family with two parents and only one child. Outside the family, the structural component may refer to geographic mobility of a family. It is relatively easier for a family that has lived in the community for a long time to accumulate a larger stock of social capital with institutional agents than a family that has moved frequently.

For Smith et al. (1995), the existence of a favorable social structure does not automatically translate into an abundance of social capital. Rather, social capital is created through the process component, which refers to intentional interactions between parents and children, as well as between parents and institutional agents to achieve common educational goals. Within the family, the process can include factors such as the quantity and quality of parent-child interactions, parental help with students' homework, and sanctions associated with educational performance. Outside the family, the process refers to active participation in various kinds of school and community-based activities. Following this argument, parent involvement in school related activities is the process part of the social capital parents invest in their children's education.

Possible Courses of Parental Involvement

As mentioned earlier, previous studies have largely treated parental involvement in school related activities as a function of the social and demographic characteristics of the family. One such characteristic is the SES of parents. Lareau (1987, 1989) has argued that the current public school system is largely a middle-class institution emphasizing middle-

class values and run by a middle-class staff. Because middle-class parents are more likely to share cultural practices and perspectives with school teachers, counselors and administrators, they are more likely to feel comfortable participating in school related activities and interacting with school staff than working class parents are. Empirical studies focusing on the relationship between parental SES and involvement have yielded results consistent with Lareau's argument. Compared with their working class counterparts, middle class parents are more actively involved in school related activities (Ho & Willms, 1996; Kerbow & Bernhardt, 1994; Lareau, 1987, 1989).

Parents' race and ethnic backgrounds are additional characteristics that may affect the degree of parental involvement. Delgado-Gaitan (1991) has pointed out that parents from different races may have different attitudes towards school involvement due to different cultural backgrounds. Because African-Americans and Hispanics are largely under-represented in the middle-class, it is often suspected that they are less likely than their white counterparts to interact with middle-class school staff. However, a few studies using large national data sets have found the opposite trend: African-American and Hispanic parents actually show more involvement with their child's school than white and Asian parents (Ho & Willms, 1996; Kerbow & Bernhardt, 1994), even after parental SES and other demographic characteristics are controlled. Age of the child is another demographic factor that is related to the extent of parental involvement. As Epstein (1987, 1992) has demonstrated, parental contacts with the school steadily decrease as a child grows older.

The concept of social capital offers additional explanations for variations in parental involvement. Parental involvement with schools can be regarded as the process part of social capital invested into the relationships between parents and institutional agents. However, the level of such process social capital is not independent from the structural components of social capital. In particular, family structure factors such as single-parenthood, large family size and frequent changes of residence are likely to constrain parents from converting parental resources (e.g., time, energy, attention, commitment) into actual involvement with institutional agents. A family with any of these three structural features either has to dilute its finite parental resources to a large number of children, or rely on resources coming from only one parent, or has relatively little time and few opportunities to socialize with people outside family. All these structural impediments can reduce opportunities

available to parents to fully develop social ties with institutional agents. In short, in addition to parents' individual characteristics, we argue that differences in family structure may also affect levels of parental involvement with the school.

Residential Location and Parental Involvement

Previous studies of parental involvement have largely focused on individual characteristics of parents. This approach has ignored the potential impact of a geographic environment on parental involvement. In this study, we argue that residential location has a potential "contextual" effect on the frequencies of parental participation in school related activities for two related reasons. First, residential location provides a macro social environment in which social capital is invested. Various social environments may nourish different social norms either encouraging or discouraging intimate social interactions. Classical sociologists such as Toennies (1887), Durkheim (1893) and Wirth (1938) have long pointed out that high levels of urbanism, characterized by large population size and high population density, tend to weaken the scope of primary relationships and consequently limit people's interactions. From the perspective of the social capital model, urbanism imposes a structural barrier for urban parents to interact actively with institutional agents. Furthermore, this lack of a community social network can hinder the information flow among parents and weaken the community's capacity to promote active parental involvement with the school. In contrast, small rural localities often characterized with close social ties and intimate interpersonal relationships provide favorable environmental structures promoting parental interactions with school staff.

Second, for both conceptual and practical reasons, communities, neighborhoods, or specific geographic localities can be regarded as mini-cultures or sub-cultures, each having distinctive cultural values, norms, ideologies and rituals. As suggested by Bourdieu (1977), the ways parents within such sub-cultures perceive parental involvement in their children's education and the actual action of involvement are "cultural practices" and "cultural rituals." The influences of sub-cultures on cultural rituals work through factors such as the general attitude of the community towards parental participation and the forms and frequency of other parents' involvement actions (Lareau, 1987, 1989). Because cultural norms and rituals in urban areas often reflect impersonal social relationships and less

attachment to local communities or neighborhoods, urban parents are less likely to participate actively in school related activities. In contrast, cultural norms emphasizing intimate interpersonal relationships and close attachment to local communities are likely to occur in small and less organizationally complex environments. Influenced by such sub-culture norms, rural parents are more likely to be involved in community and school related activities.

In summary, previous research of parental involvement can be improved upon in at least two ways. First, while Epstein's functional model has identified important predictors of parental involvement (e.g., children's age and attitude/practice of school staff), the model can be further strengthened by incorporating Coleman's concept of social capital. One approach is to treat interactions between parents and institutional agents as parental investment in the process component of social capital and investigate how the structural component facilitates or impedes such investment. As discussed earlier, we expect that a favorable family structure (represented by small family size, dual-parent household and long period of local residency³) would enhance parental opportunities to interact with institutional agents. Following Epstein (1987), we also expect parents with young children⁴ and parents who perceive school staff as easy to access are more likely to participate in school activities than their respective counterparts.

Second, we argue that environmental factors such as residence location are important in shaping the level of parental investment in their social relationships with institutional agents and, therefore, should also be included in the model. For reasons discussed earlier, we expect that rural parents would participate more in school related activities than parents living in other communities. Finally, we also expect that the impact of parental SES on parental school involvement is likely to be larger in rural communities than in urban communities. This last expectation represents

³ It is also possible that parents who have recently moved into a district need to contact a school frequently in order to find out first hand information about their child's new school.

⁴ It is possible that a parent has more than one school-aged child who goes to the same school. Because the Missouri School Improvement Program parent questionnaire is child specific, the parent is requested to provide responses to the questions pertaining to the child who brings back the questionnaire. Thus, our analysis has focused on the relationship between the age of one particular child and the amount of parental involvement associated to that child.

our interest in further investigating possible interaction effects between residence location and parents' SES. As mentioned earlier, previous research has consistently underscored the association of parental SES with parents' involvement with the school (Ho & Willms, 1996; Kerbow & Bernhardt, 1994; Lareau, 1987, 1989). In this study, we argue that the SES effect on school involvement may vary across different geographic locations. It is likely that an urban environment discourages frequent and primary interpersonal interactions for both working and middle-class. Yet, given that working class parents tend to participate less than their middle-class counterparts (Ho & Willms, 1996; Lareau, 1987, 1989), the impeding effects of urban environment may "off-set" the involvement of working class parents less than that of middle-class, because the former has been relatively low to start with and, therefore, does not have much room to be further suppressed. In contrast, the involvement level of middle-class parents has been relatively high and therefore, can be more responsive to environmental effects. Thus, we suggest that the social and cultural norms in urban areas may "off-set" parental involvement more for middle-class than their working-class counterparts, resulting in a possibly smaller SES effect in urban areas.

METHOD

Sample and Data

The data used are from the Missouri School Improvement Program (MSIP). Supported by the Missouri Department of Elementary and Secondary Education, this project aims to evaluate the quality of education in each of Missouri's 536 school districts following a five-year cycle. Seventeen different questionnaires pertaining to various school positions (such as students, parents, teachers and administrators) were developed and are administered by MSIP personnel prior to the assessment of each school district to facilitate the evaluation process.

The current study was based on the responses from parents living in school districts that participated in the MSIP project during the 1992-93 school year. The final sample included 57,139 parents from 296 schools. These schools were selected by a stratified sampling strategy according to four demographic aspects of the population in the state of Missouri: geographic location, student enrollment, type of school (elementary/middle/high schools), and percent of minority enrollment.

Within each strata, schools were randomly selected with probabilities proportional to the total number of schools in that category. In subcategories with only a small number of schools, schools were disproportionally over-sampled in order to include these kinds of schools in our analyses. School-level weights were calculated and used in our regression analyses in order to compensate for the unequal probabilities associated with including certain schools.

All students in chosen schools took home the MSIP parent questionnaire for their parents to complete. The cover letter accompanying the questionnaire assured parents that school staff would not have access to their individual responses. The completed questionnaires were sealed by parents and returned to the MSIP personnel. The average response rate in our sample is 61 percent.

Measures

Dependent Variable. The primary dependent variable is parent involvement in school related activities. The MSIP parent questionnaire contains five items designed to measure the extent of such involvement. These questions ask how often parents (1) go to an open house at school, (2) attend parent/teacher meetings, (3) visit the school, (4) talk with teachers and (5) help with after-school activities. Each item is measured by a four-point Likert scale. Because this research focuses on the extent of overall involvement rather than on different types of involvement, we constructed an additive composite, with a greater value representing more overall involvement. The reliability for this composite is adequate ($\alpha=0.77$), indicating a relatively high internal consistency among the five indicators. We then standardized the involvement composite to a mean of 0 and standard deviation of 1 in order to allow a meaningful interpretation of the OLS unstandardized regression coefficients.

Independent Variables. We first included two measures of within-family structural social capital: single-parent status and number of children in the family. We also included an ordinal measure of residence length in the present school district, based on the assumption that a longer period of residence in the same district gives parents more time and opportunities to develop social capital with institutional agents. We used the grade in which a student was enrolled as a measure of a student's age. Also, we included parents' response to a statement that school staff can be easily accessed.

The most important independent variable in this study is the geographic location of a school to which parents send their children. Previous studies have largely used either one of the two geographic classifications to measure school location: metropolitan versus nonmetropolitan and urban versus rural. The metropolitan-nonmetropolitan classification pertains to counties, while the rural-urban typology refers to places, resulting in two dichotomies which are often embedded in one another. When used separately, these classifications are potentially limited (for a detailed review and discussion of these disparities, see Elder, 1992). For instance, within a metropolitan county, some schools are located in very remote places while others are located in an obviously urban part of the county. The metropolitan versus nonmetropolitan classification ignores such differences in actual localities of schools. By the same token, the urban versus rural classification does not reflect different types of counties (metropolitan/nonmetropolitan) in which rural or urban schools are located.

In order to overcome the potential limitations of using a single classification system, we adopted an approach to combine these two classifications. The technical details of such combinations are discussed elsewhere (Elder, 1992). Based on the geographic characteristics of a school's county and its specific location within the county, schools included in our sample were classified into four groups: metropolitan-urban, metropolitan-rural, nonmetropolitan-urban and nonmetropolitan-rural.⁵ This combination allowed us to differentiate rural schools located in relatively isolated places of a large metropolitan county from schools located in an urban part of the same metropolitan county. Likewise, schools that are obviously located in an urban part of a nonmetropolitan county can also be distinguished from those located in more remote, rural areas of the same county. Most important, the current four-category measure served our research interest by allowing a straightforward

⁵ More geographic categories could be created when the two geographic classification systems were combined. We chose the current four-category measure for two reasons. First, the four-category approach provided the simplest measure that combined the two systems without leaving any category with too few cases. The current sample contained parents from 296 schools. When parents were assigned a residence location, it was based on the location of the school their children were enrolled in. Therefore, further division of geographic categories would reduce the number of schools in each category dramatically. Second, the four-category measure served our research interest by allowing a straightforward comparison of involvement by nonmetropolitan-rural parents versus those living in other communities. Because the current study did not aim to compare the involvement levels among other types of communities, creating more geographic categories would not benefit our research.

comparison of involvement by parents living in the most remote places (nonmetropolitan-rural communities) versus those living in other types of communities.

Control Variables. Two control variables, parents' SES and minority status, were introduced into our analysis. The SES composite had two major components: educational attainment of the parent being surveyed⁶ and the annual household income. Each component was standardized to a mean of 0 and a standard deviation of 1 in order to be consistent with the procedures used in national educational data sets (e.g. National Education Longitudinal Study of 1988) in constructing the SES composite. All non-missing components were then averaged. Respondents missing all components were excluded from the sample. The parent's minority status was also included.

Table 1 summarizes the basic statistics of all the variables used in the analysis.

RESULTS

Correlation Analysis

Is parental involvement related to parents' demographic characteristics, family structures and residence location? In order to answer the question, we first examined bivariate relationships between the parental involvement composite and all independent and control variables. Table 2 summarizes the zero-order correlations between these variables.

Most of the correlations between involvement and its predictors were statistically significant at 0.001 level, given the large sample size. Several correlations were modest (with r between 0.1 and 0.3). In agreement with previous findings (e.g., Lareau, 1987, 1989), parents with a high level of SES participated more than those with a low level ($r=0.26$). Both minority parents and single parents participated somewhat less than their respective counterparts ($r=-0.12$ and -0.14 , respectively). Further, parents of younger children were marginally more active in school involvement than parents of older children ($r=0.23$). Parents who thought they had easy access to school staff also tended to contact school more than

⁶ Unfortunately, the MSIP data did not include educational attainment for both parents. Because about 80 percent of respondents are mothers, the measure inclines to emphasize the mother's educational attainment.

Table 1. Variable descriptions.

Variables	Descriptions	Mean	SD	N	Min	Max
Involvement with school						
Involvement composite	Sum of the following parental activities: (1) go to an open house, (2) attend parent/teacher meetings, (3) visit the school, (4) talk with teachers, (5) help with afterschool activities	0.00	1.00	57,139	-2.57	1.76
Control variables						
Parent's minority status	Parent's minority status: 1=minorities, 0=whites	0.13	0.33	57,139	0.00	1.00
Parents' SES	Average of two standardized variables: (1) annual household income, (2) educational attainment of the parent surveyed	0.00	1.00	57,139	-2.19	2.46
Structural social capital (within family)						
Number of children	Number of children the respondent has	2.42	1.21	57,074	0.00	14.00
Single-parent households	Single-parenthood: 1=single-parent family, 0=dual-parent family	0.21	0.41	56,826	0.00	1.00
Structural social capital (outside family)						
Length of residence	Number of years respondent has lived in the current school district: 1=under 6 years, 2=6 to 10 years, 3=11 to 15 years, 4=over 15 years	2.52	1.24	56,725	1.00	4.00

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Table 1 (cont.). Variable descriptions.

Variables	Descriptions	Mean	SD	N	Min	Max
Structural social capital (outside family)						
Metropolitan-urban	Metropolitan-urban residence: 1=resident of metropolitan-urban community, 0=resident living in other kind of community	0.51	0.50	57,139	0.00	1.00
Nonmetropolitan-urban	Nonmetropolitan-urban residence: 1=resident of nonmetropolitan-urban community, 0=resident living in other kind of community	0.20	0.40	57,139	0.00	1.00
Metropolitan-rural	Metropolitan-rural residence: 1=resident of metropolitan-rural community, 0=resident living in other kind of community	0.09	0.28	57,139	0.00	1.00
Nonmetropolitan-rural	Nonmetropolitan-rural residence: 1=resident of nonmetropolitan-rural community, 0=resident living in other kind of community	0.20	0.40	57,139	0.00	1.00
Variables from Epstein's model						
Age of the child	Age of the child measured by the grade a student is enrolled in, ranging from 1=first grade to 12=twelfth grade	5.37	3.24	57,139	1.00	12.00
Parental perception of accessibility	Parents' statement about whether or not they can talk to teachers or principals: 1=strongly disagree, 5=strongly agree	4.18	0.84	56,726	1.00	5.00

Source: Missouri School Improvement Program, 1992-1993

Table 2. Zero-order correlations between variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Involvement composite	1.00											
Parent's minority status	-0.12 [†]	1.00										
Parents' SES	0.26 [†]	-0.16 [†]	1.00									
No. of children	-0.02 [†]	0.13 [†]	-0.08 [†]	1.00								
Single parent	-0.14 [†]	0.29 [†]	-0.31 [†]	-0.06 [†]	1.00							
Residence length	0.04 [†]	-0.14 [†]	0.09 [†]	-0.06 [†]	-0.11 [†]	1.00						
Metro-urban	0.01	0.27 [†]	0.12 [†]	0.02 [†]	0.14 [†]	-0.14 [†]	1.00					
Nonmetro-urban	-0.02 [†]	-0.11 [†]	-0.02 [†]	-0.02 [†]	-0.04 [†]	0.11 [†]	-0.51 [†]	1.00				
Metro-rural	-0.01	-0.10 [†]	0.02 [†]	-0.01	-0.06 [†]	-0.02 [†]	-0.31 [†]	-0.15 [†]	1.00			
Nonmetro-rural	0.02 [†]	-0.15 [†]	-0.15 [†]	0.01	-0.08 [†]	0.08 [†]	-0.52 [†]	-0.25 [†]	-0.15 [†]	1.00		
Age of the child	-0.23 [†]	-0.07 [†]	0.10	-0.07 [†]	-0.04 [†]	0.20 [†]	-0.09 [†]	-0.07 [†]	-0.04 [†]	0.07 [†]	1.00	
Perception about accessibility	0.22 [†]	0.01	0.06	-0.02 [†]	-0.01	-0.01	0.04 [†]	-0.04 [†]	-0.01 [†]	0.01	-0.18 [†]	1.00

Source: Missouri School Improvement Program, 1992-1993

[†] p < 0.001

parents who perceived school staff as being difficult to access ($r=0.22$). Interestingly, number of children in the family, length of residence and residence location did not appear to relate to involvement (r ranges from -0.02 to 0.04).

A few modest correlations between residence location and other variables deserve additional attention. As shown in Table 2, both minority and single parents were concentrated in metropolitan-urban areas ($r=0.27$ and 0.14 respectively). Further, differences in parents' SES seemed to exist among different types of communities, with metropolitan-urban parents having a marginally higher SES level ($r=0.12$) and nonmetropolitan-rural parents, a lower level ($r= -.15$).

The results from Tables 2 indicate that some variables included in this analysis were not only related to involvement, but also to other independent and control variables. Therefore, an accurate estimation of the net effect of each variable on involvement warranted controls for other variables. To achieve this, we turned to our multivariate analysis.

Multivariate Analysis

We conducted an OLS regression in which parental involvement was regressed against all the independent and control variables, as presented in Model 1. We used the nonmetropolitan-rural locale as the reference group. Then we added into Model 1 the interaction terms of SES and location measures and constructed Model 2. Table 3 presents the results from both models.

Our analysis showed modest effects of two control variables on involvement as presented in Model 1. Consistent with previous findings, SES had a significant positive effect on parental involvement independent of other factors included in the model. Specifically, each one standard deviation (SD) increase in SES led to 0.25 SD increase in parental involvement. Minority parents participated considerably less (0.21 SD) in school related activities than whites, net of other effects.

In terms of the structural component of social capital, single-parenthood had a negative impact on parental involvement. A typical single parent participated 0.11 SD less than his/her counterparts in a dual-parent family. To our surprise, the number of children had a negligible and insignificant effect on parental involvement. Yet, residence length

Table 3. Unstandardized OLS regression coefficients from the regressions of involvement on all independent variables (Model 1) and on independent variables and interactions (Model 2).

Variables	Model 1		Model 2	
	Coeff.	SE	Coeff.	SE
Intercept	-0.33***	(.026)	-0.29***	(.026)
Parent's minority status	-0.21***	(.013)	-0.22***	(.013)
Parents' SES	0.25***	(.004)	0.34***	(.010)
Number of children	-0.01	(.003)	-0.01	(.003)
Single-parent household	-0.11***	(.010)	-0.11***	(.010)
Length of residence	0.04***	(.003)	0.04***	(.003)
Metropolitan-urban	-0.12***	(.011)	-0.14***	(.011)
Nonmetropolitan-urban	-0.11***	(.012)	-0.13***	(.012)
Metropolitan-rural	-0.21***	(.016)	-0.23***	(.016)
Nonmetropolitan-rural	0.00		0.00	
Age of the child	-0.08***	(.001)	-0.08***	(.001)
Perception about accessibility	0.19***	(.005)	0.19***	(.005)
SES X location				
Metropolitan-urban			-0.12***	
Nonmetropolitan-urban			-0.07***	
Metropolitan-rural			-0.16***	
Nonmetropolitan-rural			0.00	
N	56,264		56,264	
R ²	0.17		0.18	

Source: Missouri School Improvement program, 1992-93.

*** $p < 0.001$

imposed a significant impact, with each level increase in length (approximately 5 years) leading to 0.04 SD growth in involvement.

The results from Model 1 also showed evidence supporting Epstein's (1987) findings. The age of the student was negatively associated with involvement, with each year increase in age predicting a 0.08 SD decrease in parental involvement. Further, parents' perception of accessibility to school staff had a positive effect on their actual involvement. For each level change in agreement to the statement that school staff can be easily accessed, participation increased by 0.19 SD.

After other variables were controlled, the effect of residence location was modest. As expected, parents living in nonmetropolitan-rural communities participated 0.12, 0.11 and 0.21 SD more than their counterparts in metropolitan urban, nonmetropolitan-urban and metropolitan-rural communities, respectively. These differences were independent of other effects included in the model. The entire model explained about 17 percent of total variance associated with parental involvement.

We also tested possible interaction effects between parents' SES and their residential location in Model 2. As Table 3 demonstrates, the interactions were statistically significant, with the SES slope being steeper in nonmetropolitan-rural than in other types of communities. To be specific, for each SD increase in SES, the impact of SES on parental involvement was 0.12, 0.07 and 0.16 SD less in metropolitan-urban, nonmetropolitan-urban and metropolitan-rural communities, respectively, than in nonmetropolitan-rural communities. In other words, the SES effect was larger in nonmetropolitan-rural than in other types of communities.

DISCUSSION

Previous studies have long noted the impact of parent involvement on students' academic success. Despite decades of research, only a few studies have attempted to identify factors that account for variations in parental participation. In this study, we have applied Epstein's argument about school-family linkage and Coleman's notion of social capital to study the effects of family structure and residence location on parental involvement. Based on a large parent survey, our analyses have demonstrated that the social capital model is a particularly attractive approach to investigate how social structures within and outside a family can influence social actions, such as participation in school activities.

In this study, we have elaborated on the argument of Smith et al. (1995) about the multi-dimensional nature of social capital and argued that the structure and process components are closely related with one another. Although favorable social structure within and outside family may not automatically transfer into process social capital, it certainly provides *opportunities* which facilitate such transfer. In contrast, unfavorable social structure forms *barriers* that make it hard for parents to engage in actual involvement actions. Our analysis has provided evidence to support this argument. For instance, single parents in our sample participate in school activities to a lesser extent than parents from dual-parent families independent of other factors included in the model. This lower degree of participation may be explained by the fact that single parents have to invest a relatively larger portion of parental resources to overcome this structural limitation in the family. Likewise, a long period of residence may give parents a slight structural advantage in engaging in interactions with other members of the community, including school staff.

We have also treated the residence location as a factor which may facilitate or impede parents' opportunities for establishing their social networks with institutional agents. Although the bi-variate analysis shows little effect of location on parental involvement, such effect is evident when other variables have been taken into consideration. This indicates that the effect of residence location on involvement overlaps with effects of other variables. Therefore, the preliminary results regarding the residence effect obtained from the bi-variate analysis are less accurate when other variables are not controlled. Instead, it is more appropriate to gauge the residence effect when parents living in one type of community are compared with parents with *same* social and demographic characteristics in other types of communities (i.e., when other social and demographic variables are controlled in the multivariate analysis). In short, our findings also suggest the usefulness of the current model; it provides a conceptual and methodological framework within which involvement differences among geographic locations can be appropriately compared.

Our findings have also added a research twist regarding residence location and other educational issues. For decades, many studies have continued to find that, compared with their urban and suburban counterparts, rural parents have lower educational expectations for their children and rural students have lower educational aspirations (e.g. Cobb et al., 1989; Killian & Beaulieu, 1995; Smith et al., 1995) and lower chances to attend college (Smith et al., 1995). One interpretation has been

that rural parents value education less (Jensen & McLaughlin, 1995) and, accordingly, invest less of their resources in their children's education. Empirical findings seem to be mixed regarding this argument. For instance, in their examination of the impact of family and community social capital on college attendance, Smith et al. (1995) have noticed that, compared with their urban and suburban counterparts, rural families score lower on some family social capital measures (e.g., sibling size, parental expectation for college), but higher on others (e.g., dual-parent households). In particular, rural families seem to invest the most in community social capital (measured by student church attendance and the number of residential moves since fifth grade). Furthermore, these measures of community social capital seem to have a greater impact on chances of attending college (Smith et al., 1995) and dropping out of school (Beaulieu & Israel, 1997) in rural areas than in other communities. The findings of this study are consistent with some of these previous findings. In particular, our analyses have identified a modestly higher level of parent-school interaction among rural parents than those living in other communities, net of parental SES and other independent variables included in Model 1 and Model 2 (see Table 3). This indicates that rural parents do not necessarily lack willingness to invest in their children's education. Rather, it appears that environmental forces channel parental resources into different forms of parental involvement. While social norms in rural areas may provide favorable opportunities for interpersonal interactions with other members of the community (e.g., church attendance, parental involvement with the school), the lower socioeconomic status of rural communities, the shortage of good occupational opportunities and the low demand for high educational attainment may create a lack of incentive for other kinds of parental educational investment (Hobbs, 1995; Tickamyer & Bokemeier, 1993). In short, environmental factors such as residence location seem to be important in explaining both the abundance and the shortage of various kinds of parental investment.

The current study has also shown that parents' SES has a stronger effect on involvement in nonmetropolitan-rural schools than in other types of schools. Two interpretations are possible. First, as mentioned earlier, the cultural norms in urban areas may serve as an impediment to some forms of social participation. This negative "contextual" effect in communities other than nonmetropolitan-rural could have a relatively smaller "off-setting" effect on low-SES parents than on their middle-class counterparts, because the participation level among low-SES parents is low

in the first place, leaving little room to be further reduced. On the other hand, the same contextual effect in urban communities is likely to exert a relatively greater off-setting effect on middle-class parents, who might otherwise be predisposed to participating even more frequently than lower income parents. Second, opportunities for social participation are more constrained in the rural environment, while they are more abundant and diverse in the urban environment. The school and school activities occupy a more prominent place in the social life of rural localities. The relative absence of alternatives for participation may contribute to greater parental participation in school activities independent of other influencing factors. Concurrently, because of the greater visibility and centrality of rural schools, factors that contribute to the impact of SES on parental involvement may become more powerful in the socially more constrained rural locality.

Caution should be taken when interpreting certain findings of the study. In this research, we have investigated only parental involvement in school related activities, which requires interpersonal contact. Such involvement activities emphasize the network dimension of social capital and, therefore, are obviously more sensitive to environmental factors than to process social capital within the family (e.g. helping the elementary grade children with their homework, helping high school students plan their career, etc.). More detailed investigation is needed to study possible contextual effects on other types of parental interaction with their children.

Furthermore, although the current study has found that several important measures of structural component of family social capital have a significant impact on parental involvement, the available data limit our ability to investigate another potential family structural barrier in involvement, the parental working status. Like other structural deficits, factors such as whether or not both parents work, number of working hours and the time spent on commuting to work all have the potential to limit parents' time and energy to participate in school related activities.

Finally, the final model (Model 2) has explained about 18 percent of total variance on parental involvement with the school. One reason for a relatively low R^2 is because of the large sample size. At the same time, it is obvious that most of the variance associated with parental involvement is related to variables that are not included in the study. For instance, it is likely that socio-psychological factors such as personality, self-esteem, and locus of control may affect parents' decisions on whether they participate and how much they participate. Whenever data permit, future studies can

also explore other factors that contribute to the variation in parental involvement.

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